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musterung. The adopted magnitudes are 10.19 and 9.84, respectively.

G.M.T. 1905.	Settings on (167)	(167)	Rough Position of (167) α (1905.0).	δ	Remarks.
d		m	h m s	° ′	m
Oct. 20.70	16	13.43	22 09 32	—11 25.9	Faint *, 14.4±, 20″ west.
21.79	16	13.42	22 09 37	—11 25.9	Good conditions.
23.69	16	13.21	22 09 54	—11 26.0	" "

November 25, 1905. JAMES D. MADDRILL.

NOVA AQUILÆ, No. 2.

Nova Aquilæ continues to decline in magnitude, at a rate, however, only about half as rapid as during September, or about half a magnitude per month.

Occasional measures have been made with the Rumford wedge photometer, continuing the series published in the October number. The fainter comparison stars *f, g,* and *h* have not yet been used, and may not be required this year in photometric determinations. The star *x* is 2′ 27″ south of, and $11^s.0$ preceding, *Nova.* Its magnitude from a single measure (three settings) is 11.83.

G. M. T. 1905. d	Settings on *Nova.*	Comparison Stars.	*Nova.* m	Weight.	Remarks.
Oct. 3.66	16	*de*	11.04	4	Moon.
4.66	14	*d*	11.27	3	Moon shining on objective.
12.71	..	(*e*)	....	..	Usual brightness.
20.65	20	*de*	11.41	5	Good conditions.
23.65	20	*de*	11.31	5	Good conditions.
Nov. 2.63	12	*de*	11.68	3	Moon.
14.61	12	*de*	11.68	3	Fair conditions.
20.62	..	(*dex*)	11.8	1	Estimate: *d* 5 *e* 4 *v*; *e* 1 *v* 1 *x*.
24.65	20	*de*	11.90	2	Clouds.
25.61	16	*de*	11.88	4	Good conditions.

November 27, 1905. JAMES D. MADDRILL.

MORE NEW COMPANIONS TO KNOWN DOUBLE STARS.

In the beginning of the systematic survey of the northern sky for new double stars I was disposed to pass with a purely perfunctory examination those stars already catalogued as double; but it soon became apparent that the Σ stars and those in the other older catalogues yielded nearly as large a percentage of new doubles as did the stars previously regarded as single. Usually the new pairs are so difficult that only a first-class modern telescope will reveal them; hence the fact that the earlier observers overlooked them is in no sense a reflection either upon their thoroughness or upon their keenness of vision.

The companions, which I have recently discovered, to the pairs Σ 614, Σ 625, Σ 2510, *h* 1492, and *h* 2082 are good examples of this class of objects, the new companions to Σ 614 and Σ 2510 especially being very difficult to measure. The results of my observations are as follows:—

Σ 614.

		A and B. New.		
1905.78	120°.5	0″.22	9.2 — 9.2	3^{n} 36-inch.
		AB and C = Σ.		
1905.78	68°.2	4″.11	8.5 — 9.2	2^{n} 36-inch.

Σ 625.

		B and C. New.		
1905.84	226°.8	0″.34	9.7 — 10.5	2^{n} 36-inch.
		A and BC = Σ.		
1905.81	115°.9	4″.73	8.5 — 9.3	1^{n} 36-inch.

Σ 2510.

		B and C. New.		
1905.66	195°.0	0″.25	8.7 — 9.7	4^{n} 36-inch.
		A and BC = Σ.		
1905.63	180°.8	8″.66	8.5 — 8.5	1^{n} 36-inch.

h 1492.

		B and C. New.		
1905.73	175°.1	0″.32	9.7 — 10.1	3^{n} 36-inch.
		A and BC = *h*.		
1905.68	54°.9	18″.20	9.0 — 9.2	1^{n} 36-inch.

h 2082.

		A and B. New.		
1905.82	118°.2	0″.38	9.2 — 9.7	3^{n} 36-inch.
		AB and C = *h*		
1905.80	125°.5	16″.09	8.7 — 10.0	1^{n} 36-inch.

The three Struve pairs have shown no motion since their discovery, and the Herschel pairs are too wide to be of interest as double stars.

R. G. AITKEN.

November 20, 1905.

COMET *b* 1905 (SCHAER).

The second comet of the year 1905 was discovered by SCHAER at Genoa the evening of November 17th. At the time of discovery it was within four degrees of the north pole. It has since moved south very rapidly, and crossed the equator on the 3d of December. The rapidity of this apparent motion was due principally to the fact that the comet was quite close to the Earth. At the time of discovery the comet was about twenty million miles away, less than one fourth of the distance of the Sun. Its nearest approach to the Sun was October 25th, when the distance was one hundred million miles.

Since discovery the comet has been receding from both the Earth and the Sun, and is becoming rapidly fainter. During December it will move southward through *Aquarius.*

The following elements of the orbit of this comet were derived by Mr. A. J. CHAMPREUX and myself from three observations made at the Lick Observatory on the 18th, 21st, and 25th of November; the first two by AITKEN, the last by SMITH. The method used is Professor LEUSCHNER'S "short method."

ELEMENTS.

$$\begin{array}{rl}
T = & 1905 \text{ October } 25.02430 \\
\omega = & 132^\circ\ 07'\ 26''.8 \\
\Omega = & 223\ \ 04\ \ 08\ .3 \\
i = & 140\ \ 27\ \ 14\ .0 \\
\phi = & 74\ \ 41\ \ 13 \\
\log a = & 0.020856 \\
\log e = & 9.984301 \\
q = & 1.049195 \\
\log \mu = & 1.344119 \\
\text{Period} = & 160.6526 \text{ years}
\end{array}
\quad \left.\begin{array}{l} \\ \\ \\ \end{array}\right\} 1905.0$$

An attempt was made to pass a parabola through the three positions. The computations were made so as to represent